

DETAILED ACTION

Election/Restrictions

1. Claims 35-49 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 31 August 2010.

Response to Arguments

2. The objection to the to the specification is withdrawn in view of the amendment.
3. The rejections under 35 USC 112, 2nd paragraph are maintained because, contrary to Applicant's assertion, the claims still read *from* about 70 microns, lacking an upper limit and is inclusive of values outside the range of 65-75 microns recited in the parent claims.
4. With respect to the cited prior art, Applicant's arguments have been fully considered, but they are not persuasive.

A. As an initial point, independent claim 1 has been amended to recite *a coating which consists essentially of magnesium powder and a binder*. The transitional phrase *consisting essentially of* limits the scope of the claim to the specified materials or steps and those that do not materially affect the basic and novel characteristics of the claimed invention. MPEP 2111.03. Applicant has made no statement expressly identifying the basic and novel characteristics of the invention. Applicant does state:

The high activity of magnesium used in the methods of the claimed invention, when compared to the activities of most other metals, permits the method of the present

invention to be used on substrates made of two or more components of different metals in contact with one another (e.g., an aluminum component in contact with a steel component) without the risk of improving the corrosion resistance of one component while promoting corrosion of another component. See paragraph [0023] of the pending application. In addition, the method of the claimed invention is carried out by using a coating which includes the magnesium powder and a binder. The coating can include one or more other materials, such as other metal particles, solvents, and the like. See paragraph [0033].

This disclosure is not sufficient to establish what is or is not considered a basic and novel characteristic of the invention. While it may be the high activity of the magnesium used that permits its use with different metal substrates, there is no evidence that said activity would be adversely affected by the presence of the other metals in the cited referenced; nor is this feature claimed. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Primary Examiner holds that such a distinction cannot persuasively made in view of the disclosure at least at 10:22+ of the inst. spec., where many other, additional metals are disclosed, including some — such as Fe — that are disclosed in the cited references. It is presumed that the presence of these metals does not adversely affect the basic and novel characteristic of the invention.

B. With respect to Applicant's arguments contra the prior art, they are not persuasive. It appears that Applicant has misapprehended the manner in which the Primary Examiner has combined the references. Applicant argues that the various coating compositions are not combinable, any one with any other. This is not the basis of the Primary Examiner's rejection. The test for obviousness is not

whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). It is the Primary Examiner's position that the compositions of Wurbs, Parson, and McKaveny, each individually, are capable of imparting corrosion resistance when applied on an Al or Al-alloy substrate. Such an application would have presented itself as obvious to one skilled in the art in view of Gros, where Mg-powder + binder compositions are applied to such substrates for such a purpose. Applicant has presented no evidence that the compositions of Wurbs, Parson, or McKaveny, each cannot impart corrosion protection to an Al or Al-alloy substrate.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 11 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Both of these claims recite *from about 70 microns* which is indefinite since no upper limit is specified and which fails to further limit the claim from which it depends, which recites a range of 65-75 microns.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-3, 5-8, and 17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurbs et al. (US 2,933,400 A) or Parson et al. (US 4,083,726 A); each in view of Gros (WO 2003/089529 A1; reference made to US 2005/0161641 A1 as the English-language equivalent).

A. i. Wurbs teaches a process for providing a metal substrate with a rust-prevention coating comprising magnesium powder in a binder [1:15-18 and 1:60-2:68]. On the subject of chromium, the reference is silent; which the Primary Examiner interprets as a fair teaching that the rust-prevention coating of this reference contains no chromium at all. With

specific respect to claim 17, it is the Primary Examiner's position that the disclosure of a varnish binder anticipates the claimed polymeric binder.

ii. Parson teaches a process for providing a metal substrate with a corrosion-protecting coating [abstract and 1:11-16]. The coating comprises a polymeric organic binder [2:30-46] and powdered magnesium [3:43-46]. Inclusion of chromates is optional, with several non-chromium alternatives clearly taught [3:13-3:42].

- B. Neither Wurbs nor Parson expressly teaches that the metal substrates are the claimed aluminum or aluminum alloys.
 - C. Gros teaches that aluminum and aluminum alloy surfaces may be protected against corrosion by application of a magnesium powder in a binder [0017, 0091].
 - D. Consequently, it would have been obvious to one skilled in the art to apply the compositions of Wurbs and Parson to an aluminum or aluminum alloy substrate in order to impart corrosion protection thereto. With specific respect to claims 6-8, it is the Primary Examiner's position that by virtue of the fact that the claimed copper-containing aluminum alloys are corrosion-susceptible, it would have been further obvious to one skilled in the art to apply the compositions of Wurbs and Parson thereto for the same reason.
10. Claims 1-3, 5-8, 17, 30, and 31, are rejected under 35 U.S.C. 103(a) as being unpatentable over McKaveney et al. (US 4,360,384 A) in view of Gros (WO

2003/089529 A1; reference made to US 2005/0161641 A1 as the English-language equivalent).

- A. McKaveney teaches a process for providing a metal substrate with a corrosion-protection coating [abstract]. The coating comprises powdered magnesium in a cross-linked polymeric binder that may include silicates [3:5-6:60]. With specific respect to claims 30 and 31, this reference discloses various magnesium alloys, including those comprising magnesium and manganese.
- B. McKaveney does not expressly teach that the metal substrates are the claimed aluminum or aluminum alloys.
- C. Gros teaches that aluminum and aluminum alloy surfaces may be protected against corrosion by application of a magnesium powder in a binder [0017, 0091].
- D. Consequently, it would have been obvious to one skilled in the art to apply the composition of McKaveney to an aluminum or aluminum alloy substrate in order to impart corrosion protection thereto. With specific respect to claims 6-8, it is the Primary Examiner's position that by virtue of the fact that the claimed copper-containing aluminum alloys are corrosion-susceptible, it would have been further obvious to one skilled in the art to apply the composition of McKaveney thereto for the same reason.

11. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parson alone in view of Gros or, in the alternative, Wurbs or McKaveney et al. in view of both Parson and Gros.

A. The teachings of Parson, Wurbs, McKaveney, and Gros, are detailed above.

B. None of these references expressly teaches the claimed size and amount of powdered magnesium. Parson teaches that these are result-effective variables affecting not only the corrosion-resistance of the coating but the overall cost of the coating process [3:44-47 and 4:6-20]. Additionally, it is the Primary Examiner's position that these are result-effective variables because they also affect the coating characteristics of the composition as well (viscosity, for example). Consequently, it is the Primary Examiner's position that it would have been obvious to one of ordinary skill in the art to modify the process of any one of Parson, Wurbs, or McKaveney, in order to optimize such a result-effective variables by routine experimentation absent evidence of criticality [MPEP 2144.05].

12. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wurbs, Parson, or McKaveney, each in view of Gros, additionally in view of Mansfeld et al. (US 6,632,294).

A. The teaching of Wurbs, Parson, McKaveney, each in view of Gros, are detailed above.

- B. None of these references expressly teaches the claimed cerium pretreatment.
 - C. Mansfield teaches that metal substrates may be coated with cerium so as to impart a protective, impermeable coating thereto [3:45-4:20].
 - D. It would have been obvious to one skilled in the art to pre-treat with cerium. One skilled in the art would have been motivated to do so by the desire and expectation of imparting further protection to the metal surface.
13. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurbs, Parson, or McKaveney, each in view of Gros.
- A. The teaching of these references are detailed above.
 - B. None of these references teach the particular substrate or magnesium flake recited in these claims.
 - C. It is the Primary Examiner's position that, because none of the cited references are expressly limited to one particular substrate type or configuration, it would have been obvious to one of ordinary skill in the art to modify the process of any one of these references to coat the claimed surface with the expectation of similar results: imparting corrosion protection thereto. Additionally, it is the Primary Examiner's position that it would have been obvious to modify the process of any one of the claimed references so as to utilize any suitable form of the magnesium powder, including magnesium flake, with the expectation of similar results: imparting corrosion protection to the substrate.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-3, 5-8, and 17-20, are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 15-19, 20, 23, 25, 51, and 63-66 of copending Application No. 11/992,112. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the copending claims is fully encompassed by the subject matter of the instant claims such that in performing the process of the copending claims one necessarily performs the process of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

16. Claims 21-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither teaches nor suggests the additional compositional limitations of these claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM PHILLIP FLETCHER III whose telephone number is (571)272-1419. The examiner can normally be reached on Monday through Friday, 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1715

5 November 2010